AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Previously Presented): A programmer for a medical device, the programmer comprising:

a wireless telemetry circuit adapted to communicate with the medical device;

a boost converter adapted to convert a battery voltage to an operating voltage for the programmer; and

a control circuit adapted to inhibit pulse skipping by the boost converter when a level of the battery voltage is greater than a threshold voltage.

Claim 2 (Previously Presented): The programmer of claim 1, wherein the boost converter activates pulse skipping when the operating voltage exceeds a reference voltage.

Claim 3 (Original): The programmer of claim 1, wherein the boost converter is a fixed-frequency switching mode boost converter.

Claim 4 (Previously Presented): The programmer of claim 1, wherein the control circuit includes a transistor coupled to transmit the battery voltage to the boost converter when the transistor is ON, wherein the transistor turns OFF when the battery voltage exceeds the threshold voltage.

Claim 5 (Original): The programmer of claim 4, wherein the control circuit includes a comparator to compare the battery voltage to the threshold voltage, wherein an output of the comparator is coupled to a gate of the transistor to turn the transistor ON and OFF based on the comparison.

Claim 6 (Original): The programmer of claim 4, wherein the transistor includes a MOSFET, and the transistor transmits the battery voltage, less a body diode drop of the MOSFET, to the boost converter when the transistor is OFF.

Claim 7 (Original): The programmer of claim 4, wherein the transistor includes a MOSFET, and the transistor transmits the battery voltage, less a resistor voltage drop, to the boost converter when the transistor is OFF.

Claim 8 (Original): The programmer of claim 4, wherein the transistor includes a MOSFET, and the transistor transmits the battery voltage, less an external diode drop, to the boost converter when the transistor is OFF.

Claim 9 (Original): The programmer of claim 4, wherein the transistor includes a back-to-back MOSFET pair having a first MOSFET and a second MOSFET, and the transistor transmits the battery voltage less an external diode drop, to the boost converter when each of the first and second MOSFETs is OFF.

Claim 10 (Original): The programmer of claim 1, wherein the wireless telemetry circuit includes an antenna mounted internally within a housing associated with the programmer.

Claim 11 (Canceled).

Claim 12 (Previously Presented): The programmer of claim 1, wherein the threshold voltage is approximately 2.4 volts to 2.6 volts.

Claim 13 (Original): The programmer of claim 1, wherein the control circuit inhibits pulse skipping by the boost converter by limiting the level of the battery voltage applied to the boost converter.

Claim 14 (Original): The programmer of claim 1, further comprising a battery source to produce the battery voltage.

Claim 15 (Previously Presented): The programmer of claim 14, wherein the battery source includes two or more AAA battery cells, AA battery cells, C battery cells, or D battery cells.

Claim 16 (Original): The programmer of claim 1, wherein the programmer is a handheld neurostimulation programmer.

Claim 17 (Original): The programmer of claim 1, wherein the operating voltage is approximately 2.2 to 3.2 volts.

Claim 18 (Previously Presented): A method for controlling a power supply in a programmer for a medical device, the method comprising:

applying a battery voltage to a boost converter to convert the battery voltage to an operating voltage for the programmer; and

inhibiting pulse skipping by the boost converter when a level of the battery voltage is greater than a threshold voltage.

Claim 19 (Previously Presented): The method of claim 18, further comprising activating pulse skipping by the boost converter when the operating voltage exceeds a reference voltage.

Claim 20 (Original): The method of claim 18, wherein the boost converter is a fixed-frequency switching mode boost converter.

Claim 21 (Previously Presented): The method of claim 18, further comprising transmitting the battery voltage to the boost converter via a transistor, and turning the transistor OFF when the battery voltage exceeds the threshold voltage.

Claim 22 (Original): The method of claim 21, further comprising comparing the battery voltage to the threshold voltage with a comparator, wherein an output of the comparator is coupled to a gate of the transistor to turn the transistor ON and OFF based on the comparison.

Claim 23 (Original): The method of claim 21, wherein the transistor is a MOSFET, and the transistor transmits the battery voltage less a body diode drop of the MOSFET to the boost converter when the transistor is OFF.

Claim 24 (Previously Presented): The method of claim 21, wherein the transistor includes a MOSFET, and the transistor transmits the battery voltage, less a resistor voltage drop, to the boost converter when the transistor is OFF.

Claim 25 (Previously Presented): The method of claim 21, wherein the transistor includes a MOSFET, and the transistor transmits the battery voltage, less an external diode drop, to the boost converter when the transistor is OFF.

Claim 26 (Previously Presented): The method of claim 21, wherein the transistor includes a back-to-back MOSFET pair having a first MOSFET and a second MOSFET, and the transistor transmits the battery voltage less an external diode drop, to the boost converter when each of the first and second MOSFETs is OFF.

Claim 27 (Previously Presented):The method of claim 18, wherein the programmer includes wireless telemetry circuitry with an antenna mounted internally within a housing associated with the programmer.

Claim 28 (Canceled).

Claim 29 (Previously Presented): The method of claim 18, wherein the threshold voltage is approximately 2.4 volts to 2.6 volts.

Claim 30 (Previously Presented): The method of claim 18, further comprising inhibiting pulse skipping by the boost converter by limiting the level of the battery voltage applied to the boost converter.

Claim 31 (Previously Presented): The method of claim 18, further comprising supplying the battery voltage from a battery source.

Claim 32 (Original): The method of claim 31, wherein the battery source includes two or more AAA battery cells, AA battery cells, C battery cells, or D battery cells.

Claim 33 (Previously Presented): The method of claim 18, wherein the programmer is a handheld neurostimulation programmer.

Claim 34 (Previously Presented): The method of claim 18, wherein the operating voltage is approximately 2.2 to 3.2 volts.

Claim 35 (Previously Presented): A system for controlling a power supply in a programmer for a medical device, the system comprising:

means for applying a battery voltage to a boost converter to convert the battery voltage to an operating voltage for the programmer; and

means for inhibiting pulse skipping by the boost converter when a level of the battery voltage is greater than a threshold voltage.

Claim 36 (Previously Presented): The system of claim 35, further comprising means for activating pulse skipping by the boost converter when the operating voltage exceeds a reference voltage.

Claim 37 (Original): The system of claim 35, wherein the boost converter is a fixed-frequency switching mode boost converter.

Claim 38 (Previously Presented): The system of claim 35, wherein the battery voltage is transmitted to the boost converter via a transistor, the system further comprising means for turning the transistor OFF when the battery voltage exceeds the threshold voltage.

Claim 39 (Original): The system of claim 38, wherein the transistor is a MOSFET, and the transistor transmits the battery voltage less a body diode drop of the MOSFET to the boost converter when the transistor is OFF.

Claim 40 (Original): The system of claim 38, wherein the transistor includes a MOSFET, and the transistor transmits the battery voltage, less a resistor voltage drop, to the boost converter when the transistor is OFF.

Claim 41 (Original): The system of claim 38, wherein the transistor includes a MOSFET, and the transistor transmits the battery voltage, less an external diode drop, to the boost converter when the transistor is OFF.

Claim 42 (Original): The system of claim 38, wherein the transistor includes a back-to-back MOSFET pair having a first MOSFET and a second MOSFET, and the transistor transmits the battery voltage less an external diode drop, to the boost converter when each of the first and second MOSFETs is OFF.

Claim 43 (Original): The system of claim 35, wherein the programmer includes wireless telemetry circuitry with an antenna mounted internally within a housing associated with the programmer.

Claim 44 (Canceled).

Claim 45 (Original): The system of claim 35, wherein the threshold voltage is approximately 2.4 volts to 2.6 volts.

Claim 46 (Original): The system of claim 35, further comprising means for inhibiting pulse skipping by the boost converter by limiting the level of the battery voltage applied to the boost converter.

Claim 47 (Original): The system of claim 35, further comprising a battery source to supply the battery voltage.

Claim 48 (Original): The system of claim 47, wherein the battery source includes two or more AAA battery cells, AA battery cells, C battery cells, or D battery cells.

Claim 49 (Original): The system of claim 35, wherein the programmer is a handheld neurostimulation programmer.

Claim 50 (Original): The system of claim 35, wherein the operating voltage is approximately 2.2 to 3.2 volts.

Claim 51 (Previously Presented): A neurostimulation system comprising:

an implantable neurostimulator; and

a programmer for the neurostimulator, the programmer including a wireless telemetry circuit adapted to communicate with the medical device, a boost converter adapted to convert a battery voltage to an operating voltage for the programmer, wherein the boost converter activates pulse skipping when the operating voltage exceeds a reference voltage, and the boost converter is a fixed-frequency switching mode boost converter, and a control circuit adapted to inhibit pulse skipping by the boost converter when a level of the battery voltage is greater than a threshold voltage.

Claim 52 (Canceled).

Claim 53 (Previously Presented): The system of claim 51, wherein the threshold voltage is approximately 2.4 volts to 2.6 volts.

Claim 54 (Previously Presented): The system of claim 51, wherein the control circuit inhibits pulse skipping by the boost converter by limiting the level of the battery voltage applied to the boost converter.

Claim 55 (Previously Presented): The system of claim 51, further comprising a battery source to produce the battery voltage.

Claim 56 (Previously Presented): The system of claim 55, wherein the battery source includes two or more AAA battery cells, AA battery cells, C battery cells, or D battery cells.

Claim 57 (Previously Presented): The system of claim 51, wherein the programmer is a handheld neurostimulation programmer.

Claim 58 (Previously Presented): The system of claim 51, wherein the operating voltage is approximately 2.2 to 3.2 volts.

Claim 59 (Previously Presented): The programmer of claim 1, further comprising a battery voltage monitor coupled to the control circuit, wherein the battery voltage monitor monitors the level of the battery voltage.

Claim 60 (Previously Presented): A programmer for a medical device, the programmer comprising:

a wireless telemetry circuit configured to communicate with the medical device;

a fixed-frequency, switching mode boost converter configured to convert a battery voltage to an operating voltage for the programmer, wherein the boost converter performs pulse skipping when the operating voltage exceeds a reference voltage; and

a control circuit configured to limit a level of the battery voltage applied to the boost converter when the battery voltage exceeds a threshold voltage, thereby inhibiting performance of pulse skipping by the boost converter.

Claim 61 (Previously Presented): The programmer of claim 60, wherein the control circuit includes a transistor coupled to transmit the battery voltage to the boost converter when the transistor is ON, wherein the transistor turns OFF when the battery voltage exceeds the threshold voltage, and wherein the control circuit includes a comparator to compare the battery voltage to the threshold voltage, wherein an output of the comparator is coupled to a gate of the transistor to turn the transistor ON and OFF based on the comparison.

Claim 62 (Previously Presented): A method for controlling a power supply in a programmer for a medical device, the method comprising:

applying a battery voltage to a fixed-frequency, switching mode boost converter to convert the battery voltage to an operating voltage for the programmer, wherein the boost converter performs pulse skipping when the operating voltage exceeds a reference voltage; and

limiting a level of the battery voltage applied to the boost converter when the battery voltage exceeds a threshold voltage, thereby inhibiting performance of pulse skipping by the boost converter.

Claim 63 (Previously Presented): The method of claim 62, further comprising transmitting the battery voltage to the boost converter via a transistor when the transistor is ON, wherein limiting a level of the battery voltage applied to the boost converter comprises turning the transistor OFF when the battery voltage exceeds the threshold voltage.

Claim 64 (Previously Presented): A device for controlling a power supply in a programmer for a medical device, the device comprising:

means for applying a battery voltage to a fixed-frequency, switching mode boost converter to convert the battery voltage to an operating voltage for the programmer, wherein the boost converter performs pulse skipping when the operating voltage exceeds a reference voltage; and

means for limiting a level of the battery voltage applied to the boost converter when the battery voltage exceeds a threshold voltage, thereby inhibiting performance of pulse skipping by the boost converter.

Claim 65 (Previously Presented): The method of claim 64, further comprising means for transmitting the battery voltage to the boost converter via a transistor when the transistor is ON, wherein the means for limiting a level of the battery voltage applied to the boost converter comprises means for turning the transistor OFF when the battery voltage exceeds the threshold voltage.

Claim 66 (New): The programmer of claim 1, further comprising a comparator that compares the level of the battery voltage to the threshold voltage.

Claim 67 (New): The method of claim 18, further comprising comparing the level of the battery voltage to the threshold voltage.

Claim 68 (New): The system of claim 35, further comprising means for comparing the level of the battery voltage to the threshold voltage.

Claim 69 (New): The system of claim 51, wherein the programmer comprises a comparator that compares the level of the battery voltage to the threshold voltage.